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THE DISTRIBUTION IN CANADA OF THE EUROPEAN SCAVENGER FLY, *MUSCINA PASCUORUM* MG.

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The first records of the occurrence of *Muscina pascuorum* Meigen in North America were published by Mr. C. W. Johnson in 1923. At that time, up to the end of 1922, over 450 specimens had been examined by him from the following states: Connecticut, New Jersey, Massachusetts and New York, and a single specimen from Montreal, Quebec. The following year Mr. Johnson again dealt with the distribution of the species, indicating a spread north and south within the States already mentioned. In 1924 Mr. R. C. Shannon reported the species from Plummers Island, Maryland, thus indicating a considerable spread southwards.

In 1923, during a visit to Boston, the writer was presented with several specimens of *pascuorum* by Mr. Johnson and the occurrence of the insect in America was discussed, chiefly from the point of view of its sudden appearance in large numbers and possible dissemination outside the New England States.

The first specimens from the Ottawa district were taken by Mr. C. B. Hutchings, at Aylmer, Quebec, on August 31 and Sept. 18 and 19, 1923. The following year the species was common, the earliest record being a ♂ taken by the writer at Aylmer on July 21. During August and September about 30 additional specimens were captured. In 1925 the species was extremely common. Early in July a ♀ was observed ovipositing in a dead fish on the banks of the Rideau River, Ottawa South, while it was probably the commonest fly in the district during August and September, invading houses in fairly large numbers in September and October. Late in October hundreds of specimens were observed resting on the sunny side of trees, telephone poles, fences and sides of buildings. Still later an occasional specimen was observed in the open.

In 1925 Mr. N. K. Bigelow, of the Royal Ontario Museum of Zoology, Toronto, sent me specimens taken at Port Hope, Ontario, during September, with the information that about twenty had been captured. This represents the western limit of the species in Canada insofar as our information shows to date.

The habits of *M. pascuorum* Mg. are different from the two related species, *M. assimilis* Fallen and *stabulans* Fallen, occurring in North America. It is found entirely in late summer and autumn and is supposed to live upon fungi of the genus *Amanita* and related genera. Probably any soft fungus is suitable. It must also be more or less of a scavenger as indicated by oviposition on dead fish. Such a habit would explain the existence of the species in the spring of the year when fungi are not common, while the abundance of fungi in late summer and autumn is sufficient explanation of its abundance during these periods. The adults are most commonly found in the vicinity of swamps where they may be observed sunning on leaves and sipping honey-dew from the leaves below Aphid colonies. While occurring to some extent on flowers, they are not at all common.

The original records were based almost entirely on specimens captured in houses, where *pascuorum* was by far the most common species. Of over 450 specimens, only ten were males. The captures made in the vicinity of Ottawa and Port Hope show no such preponderance of this sex, but rather more males than females. This suggests that it is chiefly the females which hibernate in houses, under bark, etc., and that captures in the field will usually show an almost equal number of the two sexes, with the males more numerous on foliage during August and early September. In Canada the insect did not enter houses to any noticeable extent until 1925, and even then not in sufficient numbers to attract unusual attention, as evidenced from absence of complaints. Many specimens were observed on the windows of the Entomological Branch offices, some days a dozen or more being present at a time.

The inference to be drawn from our knowledge of the insect to date is that it will spread rapidly over Eastern Canada and United States, and probably over the whole of temperate North America. The chief interest in the species lies in the rapidity of this spread and the relation of same to the spread of injurious insects as indicating rapidity of dissemination in the absence of control measures. It is not anticipated that *M. pascuorum* will become a serious house nuisance in Canada owing to the fact that it does not frequent food, any inconvenience being due to the presence of the insects on windows, and owing to the fact that they do not often "buzz," as do the blue-bottle flies, they attract little attention.

The following papers dealing with the species in North America have been published:

Johnson, C. W., "The Occurrence of *Muscina pascuorum* Meigen in North America in 1922," *Psyche*, XXX, 1, 1923.

Johnson, C. W., "Notes on *Muscina pascuorum* Meigen in 1923," *Psyche*, XXXI, 17, 1924.

Shannon, R. C., "*Muscina pascuorum* Meigen in Maryland," *Ent. News*, XXXV, 104, 1924.

RECORDS OF CRANE-FLIES (TIPULIDAE) FROM ONTARIO. (DIPTERA).

BY CHARLES P. ALEXANDER,
Amherst, Mass.

Mr. C. H. Curran of the Entomological Branch, Ottawa, Canada, has kindly sent me for determination the large and interesting collections of crane-flies belonging to the Canadian National Collection of Insects. Among the material from Ontario, collected chiefly by Mr. Curran and Mr. G. S. Walley, there were included a number of species of unusual interest, including some additions to the Canadian list. It seems desirable to publish these records of the various Ontario Tipulidae, to which further additions will certainly be made. My sincere thanks are extended to Mr. Curran and Mr. Walley for the privilege of studying these important collections. The collectors are indicated by initials following the species: C.H.C.=C. H. Curran; G.S.W.=G. S. Walley.

Dicranomyia badia (Walk.). Orillia, June 5, 1925 (C. H. C.); Niagara Falls, July 30, 1925 (G.S.W.).

D. brevivena O. S. Fisher's Glen, July 1, 1925 (G.S.W.).

- D. immodesta* O. S. Orillia, June 10, 1925 (C. H. C.); Ottawa, August 10, 1925 (G.S.W.).
- D. morioides* O. S. Orillia, June 5, 1925 (C. H. C.).
- D. simulans* (Walk.). Niagara Falls, July 29, 1925 (G.S.W.).
- Geranomyia canadensis* (Westw.). Bothwell, June 13, 1925 (G. S. W.).
- Limonia cinctipes* (Say). Normandale, June 29, 1925 (G. S. W.).
- L. solitaria* (O. S.). Orillia, June 7, 1925 (C. H. C.); Normandale, July 8, 1925 (G. S. W.); Bothwell, May 23, 1925 (G. S. W.).
- Helius flavipes* (Macq.). Orillia, June 6-11, 1925 (C. H. C.); Ottawa, August 6, 1925 (C. H. C.); Pt. Pelee, June 11, July 20, 1925 (G. S. W.).
- Epiphragma fascipennis* (Say). Orillia, June 5-11, 1925 (C. H. C.).
- Pseudolimnophila inornata* (O. S.). Ottawa, May 29, 1925 (C. H. C.).
- P. luteipennis* (O. S.). Orillia, June 10, 1925 (C. H. C.).
- Limnophila sylvia* Alex. Pt. Pelee, June 19, 1925 (G. S. W.).
- L. (Lasiomastix) macrocera* (Say). Putnam, June 26, 1925 (G. S. W.).
- L. (L.) tenuicornis* O. S. Orillia, June 5, 1925 (C. H. C.); Bothwell, May 23, 1925 (G. S. W.).
- L. (Phylidorea) adusta* O. S. Dryden, June 30, 1918 (H. G. Dyar); in the U. S. N. M.
- L. (P.) auripennis* Alex. Paratype, ♂, Orillia, June 10, 1925 (C. H. C.).
- L. (P.) platyphallus* Alex. Paratype, ♂, Orillia, June 10, 1925 (C. H. C.).
- L. (Ephelia) johnsoni* Alex. Orillia, June 5, 1925 (C. H. C.).
- L. (Dicranophragma) fuscovaria* O. S. Orillia, June 5-16, 1925 (C. H. C.); Delhi, July 10, 1925 (G. S. W.).
- L. (Prionolabis) rufibasis* O. S. Orillia, June 7, 1925 (C. H. C.); Bothwell, June 13, 1925 (G. S. W.).
- Pilaria lenta* (O. S.) Fisher's Glen, July 1, 1925 (G. S. W.); Pt. Pelee, May 28, 1925 (G. S. W.).
- P. quadrata* (O. S.). Severn, June 16, 1925 (C. H. C.).
- P. recondita* (O. S.). Pt. Pelee, July 17, 1925 (G. S. W.).
- P. tenuipes* (Say) Walsh, July 3, 1925 (G. S. W.).
- Adelphomyia minuta* Alex. Orillia, June 5-7, 1925 (C. H. C.).
- Tricyphona calcar* (O. S.). Orillia, June 5-8, 1925 (C. H. C.).
- T. inconstans* (O. S.). Orillia, June 5-7, 1925 (C. H. C.); Bothwell, June 13, 1925 (G. S. W.); Fisher's Glen, July 1, 1925 (G. S. W.).
- Ormosia arcuata* (Doane). Low Bush, Lake Abitibi, June 1, 1925 (N. K. Bigelow).
- O. deviata* Dietz. Orillia, June 10, 1925 (C. H. C.).
- O. meigenii* (O. S.). Orillia, June 5, 1925 (C. H. C.); Bothwell, May 23, 1925 (G. S. W.).
- O. notmani* Alex. Orillia, June 11, 1925 (C. H. C.); Bothwell, May 23rd, 1925 (G. S. W.).
- Molophilus hirtipennis* (O. S.). Orillia, June 5, 1925 (C. H. C.).

Erioptera (Erioptera) ebenina sp. n.

General coloration shiny black; head dark gray; lateral pretergites narrowly pale yellow; knobs of halteres dark; ninth segment of male pale; hypopygium with the inner dististyle a short, stout, massive club.

Male.—Length about 4 mm.; wing 5.5 mm.

Female.—Length about 4.5 mm.; wing 5.5 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments elongate-oval. Head dark gray, more silvery-gray in front and very narrowly so on the posterior orbits; in cases, the vertex appears to have a U-shaped darker marking.

Pronotum black. Lateral pretergites narrowly pale yellow, the coloration continued to the wing-root or nearly so. Mesonotum shiny coal-black. Pleura black, with a broad longitudinal stripe of grayish bloom extending from the fore legs to the base of the abdomen, including the sternopleurite, pteropleurite and the metapleura. Halteres pale at base, the stem dusky, the knobs infuscated. Legs with the coxae more or less infuscated, especially the fore coxae; trochanters obscure yellow; femora obscure yellow at base, becoming somewhat darker outwardly, the tips conspicuously blackened; tibiae brown, the tips darker; tarsi dark brown. Wings with a faint dusky tinge, the veins dark brown; *Sc* paler. Venation: *m-cu* before or beyond the fork of *M*; vein *2nd A* only gently sinuous, ending before *m-cu*.

Abdomen black, including the hypopygium, the ninth segment of the male conspicuously light yellow. Male hypopygium with the basistyles relatively stout. Outer dististyle a powerful heavily blackened straight rod, the outer margin with very appressed microscopic serrulations, the tip acute; inner margin of style at base with a small triangular tooth. Inner dististyle about one-half the length of the outer, heavily blackened, the base or neck short and stout, soon dilated into a massive irregular head, the inner margin of the style with long erect setae. Gonapophyses appearing as slender, straight rods that narrow gradually to the acute tips. Ovipositor with the strongly upcurved tergal valves black basally, the apices broadly yellowish horn color; sternal valves entirely black.

Habitat.—Ontario, New York.

Holotype.—♂, Ottawa, Ontario, May 29, 1925 (C. H. Curren).

Allotopotype.—♀, in copula and pinned with type.

Paratype.—♀, Masten's Woods, Gloversville, New York, altitude 900 feet, June 16, 1924 (C. P. Alexander).

Erioptera (*E.*) *chlorophylloides* Alex. Pt. Pelee, June 17-24, 1925 (G. S. W.).

E. (*E.*) *septentrionis* O. S. Bothwell, May 23, 1925 (G. S. W.).

E. (*E.*) *vespertina* O. S. Orillia, June 5, 1925 (C. H. C.).

E. (*E.*) *villosa* O. S. Orillia, June 12, 1925 (C. H. C.); Pt. Pelee, June 24, 1925 (G. S. W.).

E. (*Ilisia*) *graphica* O. S. Chatham, May 21, 1925 (G. S. W.).

E. (*Hoplolabis*) *armata* O. S. Chatham, May 19, 1925 (G. S. W.); Bothwell, May 23, 1925 (G. S. W.).

E. (*Mesocypthona*) *caloptera* (Say). Bothwell, May 23, 1925 (G. S. W.).

E. (*M.*) *needhami* Alex. Orillia, June 11, 1925 (C. H. C.).

Helobia hybrida Meig. Orillia, June 10, 1925 (C. H. C.); Fisher's Glen, July 1, 1925 (G. S. W.).

Gonomyia (*Ptilostena*) *blanda* (O. S.). Orillia, June 10, 1925 (C. H. C.).

Gonomyia (Gonomyia) currani sp. n.

Belongs to the *subcinerea* group; rostrum light yellow; head dark gray; praescutum with three confluent grayish brown stripes; median area of scutum and the scutellum yellow; pleura yellow, the sternopleurite vaguely striped with reddish; knobs of halteres dusky; wings with Sc_1 ending some distance beyond the origin of Rs ; male hypopygium with the basal spine of the dististyle very small, straight, the outer spine long and gently curved.

Male.—Length 3.8–4 mm.; wing 4.5–4.8 mm.

Female.—Length about 5.2 mm.; wing 6.4 mm.

Rostrum conspicuously light yellow; palpi dark brown. Antennae dark brown throughout. Head dark gray.

Pronotum light sulphur-yellow. Lateral pretergites bright yellow. Mesonotal praescutum with three confluent dark grayish brown stripes, the lateral margins and broad humeral angles yellowish; scutal lobes grayish brown, the median area of the scutum broadly light yellow; scutellum dark yellow with a dark median spot at base; postnotal mediotergite brownish gray medially, the lateral margins yellow, the caudal margin vaguely paler. Pleura sulphur-yellow dorsally, the ventral pleurites more whitish, the sternopleurite and a narrower, more dorsal line behind the fore coxa very pale reddish to produce a vague, longitudinally striped appearance. Halteres pale, the knobs weakly infuscated. Legs with the coxae light yellow; trochanters testaceous yellow; remainder of legs light brown, the terminal tarsal segments dark brown. Wings subhyaline or faintly tinged with brown, the stigma pale brown; veins a little darker brown. Venation: Sc_1 ending some distance beyond the origin of Rs , the distance varying from about one-fourth to nearly one-half the length of the latter; cell R_2 large; cell 1st M_2 relatively small; *m-cu* close to the fork of M .

Abdominal tergites infuscated, the broad lateral margins and very narrow posterior margins of the segments yellow; sternites and hypopygium yellow. Male hypopygium with the inner dististyle on the outer margin with two chitinated spines; basal spine very small, straight and acute; outer spine very long, placed at near midlength of the style, curved gently, extending to beyond the apex of the style, the tip of the latter with powerful bristles and a few smaller setae. Gonapophyses unequal. Aedeagus terminating in a recurved acute spine.

Habitat.—Ontario.

Holotype.—♂, Orillia, June 7, 1925 (C. H. Curran).

Allotopotype.—♀, June 10, 1925.

Paratopotypes.—3 ♂♂, June 5–10, 1925 (C. H. Curran).

This interesting species of *Gonomyia* is named in honor of the collector, Mr. C. Howard Curran, to whom I am indebted for the loan of invaluable collections of Canadian Tipulidae.

G. (G.) sulphurella (O. S.). Orillia, June 12, 1925 (C. H. C.).

G. (G.) subcinerea (O. S.). Chatham, May 19, 1925 (G. S. W.).

Liogma nodicornis (O. S.). Bothwell, June 13, 1925 (G. S. W.); Normandale, June 29, 1925 (G. S. W.); Fisher's Glen, July 2, 1925 (G. S. W.).

Phalacrocer a tipulina O. S. Ottawa, May 29, 1925 (C. H. C.).

Dolichopeza americana Ndm. Orillia, June 10, 1925 (C. H. C.).

Tanyptera topazina (O. S.). Vineland, June 24, 1924 (W. G. Garlick).

- Prionocera fuscipennis* (Lw.). Pt. Pelee, June 19, 1925 (G. S. W.).
Tipula apicalis Lw. Orillia, June 11, 1925 (C. H. C.).
T. angustipennis Lw. Chatham, May 20, 1925 (G. S. W.).
T. bicornis Forbes. Orillia, June 10, 1925 (C. H. C.); Severn, June 17, 1925 (C. H. C.).
T. grata Lw. Fisher's Glen, July 1, 1925 (G. S. W.).
T. hebes Lw. Orillia, June 10, 1925 (C. H. C.).
T. macrolabis Lw. Orillia, June 10, 1925 (C. H. C.).
T. megaura Doane. Walsh, July 3, 1925 (G. S. W.).
T. monticola Alex. Orillia, June 10, 1925 (C. H. C.).
T. parshleyi Alex. Bothwell, June 13, 1925 (G. S. W.).
T. senega Alex. Orillia, June 7, 1925 (C. H. C.); Bothwell, May 23, 1925 (G. S. W.).
T. sertis Lw. Orillia, June 7-10, 1925 (C. H. C.); Pt. Pelee, May 20, 1925 (G. S. W.).
T. strepens Lw. Orillia, June 7, 1925 (C. H. C.); Putnam, June 26, 1925 (G. S. W.).
T. submaculata Lw. Bothwell, June 13, 1925 (G. S. W.).
T. sulphurea Doane. Ottawa, May 29, 1925 (C. H. C.).
T. taughannock Alex. Orillia, June 14, 1925 (C. H. C.); Pt. Pelee, May 27-June 4, 1925 (G. S. W.).
T. tephrocephala Lw. Orillia, June 7-8, 1925 (C. H. C.); Bothwell, June 13, 1925 (G. S. W.).
T. trivittata Say. Orillia, June 10, 1925 (C. H. C.).
T. valida Lw. Orillia, June 10, 1925 (C. H. C.).
T. vicina Dietz. Orillia, June 11-14, 1925 (C. H. C.).
T. (Trichotipula) oropezoides Johns. Orillia, June 7, 1925 (C. H. C.).
Nephrotoma brevioricornis (Doane). Bothwell, June 13, 1925 (G. S. W.); Normandale, July 8, 1925 (G. S. W.).
N. ferruginea (Fabr.). Normandale, June 30, 1925 (G. S. W.).
N. incurva (Lw.). Orillia, June 10, 1925 (C. H. C.); Bothwell, June 13, 1925 (G. S. W.).
N. polymera (Lw.). Normandale, July 8-10, 1925 (G. S. W.).
N. vittula (Lw.). Orillia, June 11, 1925 (C. H. C.).

TWO CORRECTIONS

Before line 17, page 225, of the September number insert "*Sagaritis congregator* n. sp." The name of the new species was unfortunately omitted from Mr. Walley's article.

On line 29, page 229, for "*Phytophaga picea* n. sp." read "*Phytophaga piceae* n. sp."

A NEW SPECIES OF APHELONEMA WITH NOTES ON OTHERS. (HOMOPTERA—FULGORIDAE).

BY E. D. BALL,

Sanford, Fla.

These curious little bullet-headed or barrel-like insects are rather rare in collections and most of the species have been described from a small number of examples. The writer recently collected a number of specimens of a very distinct species and while working upon this discovered that a number of the described species appeared to be only color varieties of other forms. Some of the specimens seem to be definitely limited to a single color pattern while others are widely variable and occur in a number of patterns.

There appear to be three rather distinct groups in the North American representatives of this genus and it may be that, when the generic relationships of the South American and South European forms are better known it will be possible to assign them to three already described genera. The first group with its short vertex and almost circular front, slightly visible from above, is represented by *simplex* and its many varieties and as this species is the type of *Aphelonema* Uhler, the first genus to be described, this group will always bear that name. The second group, which has the vertex longer and the front vertical or slightly retreating, is represented by *histrionica* and *vittata* and is much closer to the European representatives for which *Peltonotellus* Puton (*Peltonotus* Muls. Ray.) has long been used. The third group, in which the vertex is long and angular and the front transverse and conical, as represented by *nigriviridia* appears to be closely related to some South American forms that have been placed in the genus *Plagiopsis* Berg.

The following key to the North American forms is arranged to show the three groups and is based entirely on structural characters, leaving color and genital characters as additional means of identification.

KEY TO THE NORTH AMERICAN SPECIES OF APHELONEMA UHLER

- I. Vertex short transverse, parallel margined. Front almost round, slightly inflated and inclined so as to be slightly visible from above . . . 1. *simplex* Uhl.
- II. Vertex almost as long as the pronotum. Front oval or elongate, vertical or retreating slightly.
 - A. Front oval flat, median carina strong.
 - B. Brachypterous elytra with few simple veins . . . 2. *histrionica* Stal.
 - BB. Brachypterous elytra with a closely anastomosing net work of veins.
 - Angle of clypeus with a slight acute protuberance 3. *rugosa* Ball
 - AA. Front elongate, lateral carinae only slightly curved, median carina fading out above . . . 4. *bivittata* Ball
 - III. Vertex long, five angular. Front inflated, retreating, broader than long, the pustular area much enlarged above.
 - C. Vertex longer than the pronotum, definitely angular. Front strongly retreating . . . 5. *nigriviridia* n. sp.
 - C.C. Vertex about equalling the pronotum, weakly angled. Front convex above retreating below . . . 6. n. sp. Doz.

1.—*APHELONEMA SIMPLEX* Var. *SIMPLEX* Uhler

Aphelonema simplex Uhler, Bull. U. S. Geol. and Geog. Surv. I p. 356, 1876.
Aphelonema rosae Metcalf, Jl. Eli. Mitch. Sc. Soc. 38, p. 188, 1923 (male).

Vertex short transverse, front almost circular slightly convex and inclined forward, the row of pustules continuous below. Female pale dirty straw, the pronotum and scutellum often pale yellow, the eyes and genital segments dark. Male varying from pale salmon to a definite pink with the eyes dark. Length; brachypterous form, female 3 mm., male 2 mm.

This is the common form from Eastern Colorado through Kansas and Iowa to Connecticut and New Jersey. Southward the darker forms are more common though this variety has been taken sparingly in Mississippi and Florida. Metcalf apparently did not recognize that the sexes are normally quite different in color and size and so redescribed the typical male from Virginia and Miss. as a new species under the name of *rosae*.

Aphelonema simplex var. *obscura* Van Duzee

Aphelonema obscura Van Duzee, Bul. Buff. Soc. Nat. Sc. 10 p. 499, 1912.

Pale smoky brown varying to rusty brown on the abdomen. Clypeus and below still darker.

This variety was described as a distinct species from Georgia. It has been taken by the writer with typical *simplex* and intergrading forms in Kansas, Iowa and Florida. Long winged examples, even in the Mississippi valley are practically all obscurely colored with the wings hyaline.

Aphelonema simplex var. *dorsata* new var.

Head and pronotum straw color continued as a broad dorsal stripe to the apex of the abdomen. This stripe often mottled with milky white. A shining black stripe from the eye back to the apex of abdomen on either side. Legs and below pale reddish, the venter often dark.

Holotype, female, Feb. 17, 1926, Sanford, Fla.

Paratypes, two females from the same locality, Mar. 16 and June 4, all collected by the writer.

This variety is intermediate in character between *simplex* and *decorata* and was taken with examples of the latter.

Aphelonema simplex var. *decorata* Van Duzee

Peltonotellus decorata Van Duzee, Proc. Acad. Nat. Sc. Phil. 69, p. 492, 1908.

Female with vertex pronotum and scutellum straw or orange yellow, the elytra and exposed abdomen piceous. Male with the same pattern but orange or fulvous and blue black. Face and below pale, the legs orange and the venter often dark.

This is the most common form in Florida, the only state from which it has been reported. In the winter period they lose their brilliance and a number of gradations have been found varying towards the *dorsata* stripe on the one hand, the dull color of *obscura* or the straw and orange of *simplex* on the other. In the extreme form this appears as a quite distinct and striking species. Van Duzee found no structural differences between this form and *simplex* except in the pleural pieces and male genitalia and he had but a single male whose variation seems to be individual rather than specific. There does appear to be a slight but fairly constant variation in the shape of the face; in *simplex* this is almost circular while in *decorata* it is usually a trifle pointed below.

The varieties of *simplex* can all be separated from the related species by the round protruding front and the absence of black on the clypeus. They all occur in damp grassy meadows or along the edges of swamps. They apparently hibernate as adults. In the North they appear to be two brooded, one brood appearing in late June and July and the second in September and October. In Florida the first generation appears in March and April.

2 APHELONEMA HISTRIONICA Stal.

Peltonotus histrionicus Stal, Ber. Ent. Zeitschr. VI, p. 310, 1862.

Vertex about equalling the pronotum in length, much longer than in *simplex*, flat, the front margin straight. Front almost vertical, forming a slightly acute angle with the vertex, oval, truncated at both ends, strongly carinate. Brachypterous elytra with the venation simple. Straw-color with a broad white stripe, narrowly black margined, running from vertex to scutellum. Elytra white with a submarginal black stripe sometimes wanting. Abdomen with five black stripes, the median one narrow, the others broad and irregularly interrupted. Clypeus and genitalia shining black.

This is apparently a northern and mountain form. The writer has taken it above 10,000 ft. back of Ward, Colorado, in Iowa and Wisconsin and has examined examples from Pingree Park, Colo. (Drake) and The Catskills, N.Y. (Osborn and Drake) and a single shrunken example from Grants Pass, Oregon (Titus) probably belongs here. In addition it has been reported from Mass., Ont. and Nevada. It appears to extend from coast to coast in the northern portion of the United States.

Aphelonema histrionica var. *giffardi* Van Duz.

Aphelonema giffardi Van Duzee, Proc. Cal. Acad. Sc. 4th Ser. Vol 7, p. 309, 1917.

Resembling typical *histrionica* in size and form but darker in color with a light face and the costal area of the brachypterous elytra definitely dark.

The writer has examples of *histrionica* from Ward that have the light face and Dr. Drake has an example from Pingree Park, Colo just north of there that has the typical *giffardi* marking throughout. Van Duzee described this as a distinct species from Stockton, Calif., but the genital characters given are found in typical *histrionica* as individual variations, depending largely on position.

3. APHELONEMA RUGOSA Ball

Peltonotellus rugosus Ball, Can. Ent. 34, p. 263, 1902.

Resembling *histrionica* in structure with the front more nearly vertical, the clypeus more definitely angled and with a sharp median carina that is produced into an acute point on the angle. Brachypterous elytra densely and evenly reticulate. Color dirty straw with an obscure dorsal stripe margined by a series of black points. Abdomen with dots and ocellate spots. The males are often reddish with bright red legs.

This species has been taken by the writer in relatively dry situations along the base of the Rocky Mountains from the New Mexico line near Trinidad, Colo., on north through Palmer Lake and Fort Collins nearly to the Wyoming line and again on the west slopes of the Wasatch Mountains at Salt Lake and Logan, Utah. It has been reported from Kan. Ia., Dak. and Md. and from "Br. Amer." The Eastern references may belong to the preceding species. In Colorado and Utah

a generation matures in June and early July and occasional adults have been taken late in August.

4. *APHELONEMA BIVITTATA* Ball.

Peltonotellus bivittatus Ball, Can. Ent. 34, p. 263, 1902.

Resembling *histrionica* in size and general structure but with a long and comparatively narrow face. The lateral carinae only slightly curved. The median carina disappearing above. Shining blue-black with a broad median and two oblique lateral stripes arising below the eyes. Face white the lateral carinae of front black. Pustulate area of pro and mesonotum obscurely marked. Macrop-terous elytra with the margin and all the membrane beyond the cross nervures, smoky, the nervures darker.

The writer has taken this species on "short grass" areas in extreme east-ern Colorado and western Kansas, in similar areas in western Nebraska, at Mandan, N. D., and on a "knoll" where short grasses occurred in extreme north-western Iowa. Specimens have been examined from Trinidad and Pingree Park, Colo., (Drake) and Onaga, Ks. (Crev.). It is probably limited to the short grass areas of the Plains region.

5. *Aphelonema nigriviridia* n. sp.

A small elongate greenish or straw colored species with black stripes some-what resembling *bivittata* but with a much longer vertex and broader face. Length, Female 2.5 mm, male 2 mm.

Vertex definitely longer than pronotum, obtusely angulate at apex and again before the eyes, where it is narrower than the margin of the face. Face extending out to the line of the eyes giving the appearance of a parallel margined vertex but really exposing a triangular pustulate compartment. Face sloping at an angle of nearly 45 degrees, broader than long, conically inflated with a sharp median carina and wing-like lateral ones. Clypeus broad, tumid, but little more retreating than the face. Brachypterous elytra short with but few simple veins. Color; female white, fading to straw, with a slightly iridescent greenish cast. A narrow median black line from the base of the vertex to an expanded spot on the apex of abdomen. Eyes dark, a narrow black line running back parallel with a similar line on the costa. Circular carinae on each segment of abdomen narrowly black from the margin to a pair of irregular stripes arising just inside the lines on the elytra. Below greenish; a smoky arc slightly below the vertex margin.

Male; like the female except that there is a broad shining black band ex-tending from the upper part of front across the eyes and including the outer third of the elytra and abdomen. Clypeus and legs except the joints dark. Sometimes there are traces of a pair of converging stripes arising on the lateral carinae of the scutellum and following the inner fork of the claval nervures.

Holotype female, *allotype* male and four pairs of *paratypes* collected by the writer at Sanford, Fla. This is a strikingly distinct little species which has been found only in the wetter portions of the "flat woods" and along the margins of swamps.

6. *APHELONEMA* sp.

Resembling *nigriviridia* but shorter with a much shorter vertex and more rounding front. Female pale green shading towards straw color with two or

three black spots on the median carina of the last abdominal segments. Male with the abdomen and legs bright orange. Length 2 mm.

Dr. Dozier has sent me examples of this species from Miss. He is describing it in a forthcoming publication.

THE SPECIES OF HILARA OCCURRING IN BANFF AND VICINITY (EMPIDIDAE, DIPTERA).*

BY C. HOWARD CURRAN,

Ottawa, Ont.

The following descriptions are published at the present time in order that the species may be discussed by Mr. Eric Hearle in his report on mosquitoes of Banff and vicinity. The insects have been found preying upon mosquitoes and all but one of the species captured in the region are new. In order to complete the record from Banff, I am including also species collected by Mr. C. B. Garrett and have added another collected in the North West Territories by Mr. C. H. Crickmay. The six species discussed are rather similar superficially but may be readily distinguished and the following table will serve to separate them:

1. Anterior femora greatly enlarged; their tibiae broadly yellow basally; humeral bristle not developed *femorata* Lw.
Anterior femora not strongly swollen; front tibiae at most narrowly yellow basally 2.
2. Front coxae with a row of black bristles or bristly hairs along the outer anterior edge; middle coxae chiefly or wholly black haired 3.
Front coxae at most with a few black apical bristles; middle coxae mostly yellow pilose 4.
3. Propleura with several long hairs on middle portion, abdomen, in some views, conspicuously brownish grey pollinose *rufopuncta* n. sp.
Propleura at most with single hair in middle; abdomen with scarcely evident brownish pollen, shining black *crickmayi* n. sp.
4. Mesonotum appearing shining black from frontal view *auripila* n. sp.
Mesonotum opaque grey or greyish brown from frontal view 5.
5. Mesonotum blue-grey with two brown vittae (lying between the acrostical and dorsocentral hairs) *garretti* n. sp.
Mesonotum greyish brown with median brown vitta ... *granditarsis* n. sp.

Hilara rufopuncta n. sp.

Black; abdomen cinereous pruinose; thorax cinereous yellow pruinose, front basitarsi as long as their tibiae; humeri with a reddish callous below; stigma black.

Length 4.5 mm. *Male*. Head black, opaque, the oral margin shining; face and front immediately above the antennae, greyish; occiput cinerous in some lights. Face as long as the width of the third antennal joint. Front without a shining vitta. Ocelli amber yellow, the posterior ones remote. The four long hairs on the front directed outwards. Antennae black; third joint one and one-third times longer than broad; subtriangular, moderately acute; style moderately robust, as long as the third joint. Proboscis half as long as the height of the head, black; palpi brownish, with black hairs, a subapical one much longer than the others.

*—Contribution from the Division of Systematic Entomology, Entomological Branch, Dept. of Agric., Ottawa.

Thorax black, humeri with a roundish red callus below; pleura grey pollinose; dorsum yellowish or tawny pollinose; in some lights with three broad, darker vittae. Hairs moderately long, black, arranged in rows. Scutellum concolorous with the mesonotum; with four bristles.

Legs piceous; knees paler; front tibiae moderately enlarged, four-fifths as long as their femora; basitarsi greatly enlarged, almost as long as their tibiae; second joint only a little swollen, the following joints successively shorter. Pile of legs mostly black, fairly long; on the outer superior surface of the middle and hind femora, and their lower border and the outer margin of all the tibiae and the anterior surface of the hind ones, with a row of long, sub-ciliate or ciliate black hairs; front tibiae with yellow pubescence antero-ventrally; hind tibiae with yellowish pile. Anterior basitarsi with abundant yellowish pubescence in some lights, with black pile above, and a subapical, long, slender hair.

Wings hyaline, stigma deep brown. Second vein almost straight. Last section of fifth vein equal to the penultimate section. Base of wing very narrowly yellow. Halteres brown, the base yellow; squamae reddish with a broad brown border and mostly black fringe.

Abdomen black, with a greyish sheen; when viewed from in front cinereous; with moderately long black pile. Hypopygium, when viewed from the side, with the apex roundish, the lower margin flattened, so that the curve is almost all above; terminal portion, (in normal position, not the actual terminal parts) greyish yellow pruinose; the remainder more blackish.

Holotype—♂, Banff, Alberta, 1916, (N. B. Sanson), No. 537 in the Canadian National Collection.

Paratypes—6 ♂, Banff, Alta., July 13, 1925, (E. Hearle).

***Hilara crickmayi* n. sp.**

Allied to *baculifer* Melander, but readily distinguished by the purely hyaline wings. Differs from *atra*, besides in the vittate thorax, by the tawny pollen on the mesonotum. Pile wholly black.

Length 3.5 to 3.75 mm. *Male*. Face short, not longer than the width of the second antennal joint; the epistoma prominent, shining; face and front opaque black, the former and a triangle above the antennae silvery greyish in some lights. Front with two long, outwardly directed bristles on either side and several smaller ones in a row on the lateral third. Ocelli reddish, their triangle large, the posterior ones remote from each other and close to the eyes. Antennae black; third joint subtriangular, half longer than broad, the style rather stout, two-thirds as long as the third joint. Proboscis between half and three fourths as long as the height of the head, palpi half as long as proboscis, black, with several long, black bristles.

Thorax shining black, the ground color obscured on the dorsum by greyish brown or tawny pollen, leaving three distinct (when viewed from in front) black stripes, in the middle of which is a row of bristles. In addition the sides of the mesonotum are somewhat shining. Pleura greyish pollinose.

Legs wholly black; anterior tibiae thickened, so that at their apex they are about equal in width to the middle of the femora; front basitarsi about as long as their femora, longer than the tibiae, the following joints short, sub-equal, some-

what swollen. The front tibiae bear rather long black hairs on the under and upper surfaces, the middle and hind femora and tibiae with long pile, the hind tibiae with three spines on outer surface.

Wings clear hyaline; stigma brown; luteous behind the first vein, and reaching almost to the second vein posteriorly. The last section of the fifth vein is but little longer than the penultimate section. Halteres black.

Abdomen shining black, the base and venter lightly greyish pollinose. Hypopygium brownish black, not shining, very thin on its rounded margin, the apices of the lobes shining; median lobe narrowed and slightly produced, the upper slender, sharp.

Holotype—♂, Fort Wrigley, N.W.T., July 25, 1922 (C. H. Crickmay), No. 535 in the Canadian National Collection, Ottawa.

Paratypes—3 ♂, same data, July 31st.

***Hilara auripila* n. sp.**

Legs black; knees not yellow, hypopygium with conspicuous yellow hair; generally shining black.

Length 4 mm. *Male*. Face about as long as the first two antennal joints combined, broadened below, the oral margin not produced, shining black, the head elsewhere opaque; face and front just above the antennae with grey pollen which appears silvery in some lights; front and occiput black. Black hairs of front as usual, occiput with conspicuous black hairs below. Antennae black, third joint subtriangular, one-fourth longer than broad; style robust, almost as long as the third joint, its spine slender, almost colorless. Proboscis about half as long as height of head; palpi brown or black, with numerous black hairs. Ocelli amber yellow, the posterior ones remote.

Thorax shining black, the posterior half of the dorsum with golden yellow pollen, which emits a narrow stripe forward about half way to the anterior margin on either side. Hairs black; arranged in rows. Pleura greyish pollinose, more shining above; destitute of hairs except some yellow ones on the propleura. Scutellum concolorous with posterior half of mesonotum, with six or eight black marginal bristles.

Legs wholly deep black, the knees very narrowly brownish. Femora all long and rather slender; front tibiae about one-sixth or less shorter than their femora, not much enlarged. Front basitarsi greatly enlarged, almost as long as the tibiae, following joints sub-equal, but the second slightly longer and larger than the third. Legs wholly black pilose, the pile short and not conspicuous except on the hind tibiae, where it is longer, especially posteriorly where it is ciliate. Coxae with rather long but not abundant golden yellow pile.

Wings cinereous hyaline, appearing blackish when both are together, the stigma fuscous or cinereous, not reaching the second vein on its posterior margin. Last section of fifth vein one-sixth longer than the penultimate section. Halteres black.

Abdomen shining black, the first segment lightly greyish yellow pollinose; wholly clothed with sparse, yellow pile. Hypopygium with the apical portion (in normal position) with brownish pollen; from lateral view, oval, the lower curve more flattened, the edge not thinned.

Holotype—♂, Banff, Alberta, July 5, 1922 (C. B. D. Garrett) No. 539

in the Canadian National Collection, Ottawa.

Paratypes—4 ♂, same data.

***Hilara garretti* n. sp.**

Allied to *leucoptera* but the halteres are black; differs from *mutabilis* in having very narrowly yellowish knees and pale abdominal pile. Stigma obsolete; swollen basitarsi shorter than tibiae.

Length 2.75 mm. *Male*. Face about as long as the first two antennal joints combined; epistoma not prominent; face and front just above the antennae cinereous, front and occiput brownish, with a cinereous color in some lights; front with two long outwardly directed hairs and several shorter ones in a row on either side. Ocelli yellowish, the posterior ones moderately remote. Hairs black. Antennae black, third joint greyish; sub-triangular, twice as long as wide; arista robust, over half as long as third joint. Proboscis two-thirds as long as height of head, black; palpi black with several long black hairs. Thorax cinereous, the dorsum with a slender, obscure, anteriorly abbreviated median, and a distinct, complete, brownish stripe on either side: appearing to have only the two lateral stripes from most views. Hairs and bristles black, rather short and not abundant. Scutellum concolorous with the dorsum; with four bristles.

Legs black, knees narrowly dirty yellow. Front femora normal; tibiae not much enlarged; anterior basitarsi greatly swollen; not quite as long as the tibiae which are about one-fifth shorter than the femora. Second joint of fore tarsi distinctly longer than the third. Pile of legs not abundant, black; on the tibiae except their outer surface, pale. Hind tibiae without long bristles, their black pile conspicuous.

Wings hyaline; stigma obsolete, very faintly indicated; last section of fifth vein one-sixth longer than penultimate section. Halteres black.

Abdomen sub-shining black, lightly grey pollinose. Pile black on the middle line, pale yellow elsewhere, not abundant nor long. Viewed from the side the hypopygium is oval, the under side slightly concave, the edge not thinned.

Female. Agrees in all respects but the legs are slender and the inner side of the front tibiae on the apical two-thirds and their tarsi below are yellowish pubescent.

Holotype—♂, Banff, Alberta, July 23, 1922 (C. B. D. Garrett) No. 536 in the Canadian National Collection, Ottawa.

Allotype—♀, Banff, Alberta, June 5, 1922 (C. B. D. Garrett).

Paratypes—2 ♀, same data as Allotype.

***Hilara granditarsis* n. sp.**

Related to *rufopuncta* but the thorax does not appear black from posterior view and the hairs along the antero-ventral surface of the posterior femora are short and yellowish, only one or two near the apex being black, bristle-like and almost as long as the height of the femur; head brownish gray pollinose. Length, 4.5 to 5 mm.

Male. Palpi shining black, with black bristles; two or three pairs of short hairs in addition to the frontal bristles; ocellars as strong as frontals; hair below neck golden yellow, elsewhere black. Antennae black; third segment triangular, one and one half times as long as wide; arista almost as long as third segment. Thorax greyish or brownish grey pollinose, the mesonotum, except the sides and

broad posterior border, with yellowish brown pollen and a brown, posteriorly abbreviated, anteriorly widened, brown median vitta. Humeri with a black bristle and red spot behind; bristles of mesonotum developed, the hairs arranged in rows, moderately long.

Legs black, narrow bases of tibiae and the trochanters largely, reddish yellow. First segment of anterior tarsi as long as their tibiae, very strongly swollen, the front tibiae gradually widened to apex but not nearly as large as the basitarsus. Front and posterior coxae with yellowish hair. Posterior femora with moderately short hair; posterior tibiae with four or five widely spaced, short, antero-ventral and about twice as many dorsal bristles.

Wings greyish hyaline, tinged with brown anteriorly; stigma dark brown. Halteres brown; squamae rather greyish, with brown border and fringe.

Abdomen with brownish pollen above, greyish on sides towards the base and on venter, the dorsum with black hair and black bristles on the segmental apices the broad sides and venter with yellowish hair. Genitalia brownish pollinose, with black hairs.

Holotype—♂, Banff, Alta., Aug. 13, 1924, (E. Hearle); No. 540 in the Canadian National Collection.

Paratypes—5 males, same data.

The specimens were taken "Swarming under trees, Sawbush Lake Trail."

NEW LIFE HISTORIES AND NOTES IN PAPAPEMA NO. 24 (LEPIDOPTERA).

BY HENRY BIRD,

Rye, N. Y.

Since it has been so well established that this genus is indigenous to America, it seemed surprising when the description of an alleged new species appeared from Germany, even though the insect involved was conceded to be an importation. As to the circumstances, the specimen was captured alive in the Botanical Garden at Marburg, the impression being that it must be a North Carolina species because at the time plants were being grown there which had come from that source. Prof. Embrik Strand described the moth as *Papaipema horni*,¹ and it was placed as type, in the Biological Museum, at Berlin.

Prof. Strand had evidently relied on the Hampson Catalogue² plates for his diagnosis, and as there had been several additional names advanced in the genus since the Catalogue appeared, it became important to learn if redescription had occurred. Chance for further enlightenment concerning *horni* developed through correspondence with Prof. M. Draudt, who needed *Papaipema* examples for illustrating the plates of his noteworthy contribution to the "Seitz Macrolepidoptera of the World." In reciprocal spirit, he kindly went to the Berlin Museum, compared the type of *horni* and pronounced it to be *appassionata* Harvey. He furthermore made a colored drawing of it which was forwarded to the writer, and there is no question in the matter, this Marburg example being a rather worn specimen of the striking Pitcher-plant species. Since *Sarracenia* plants are of much botanical interest and are sold as horticultural stock to be grown in greenhouses, etc., it can readily be inferred how this American

1.—Archiv fur Naturgeschichte, 1914, A., II., pp. 160-161.

2.—Catalogue Lepidoptera Phalaenae Br. Mus. 1910, vol. IX., pls. CXXXVIII-CXXXIX.

moth was disseminated in this instance. The writer has experienced a parallel case, when *appassionata* was introduced to his own bog-garden at Rye with dormant roots of *Sarracenia drummondi* from Florida, the hibernating ova having been unwittingly transported. So, rather curiously, what was originally described as a Canadian insect from London, Ontario, meets with redescription from Germany, yet has its metropolis for predominance in the south-eastern coastal plain of our country, where the bulk of the *Sarracenia* species are endemic. The thanks of American students are thus due Prof. Draudt, and the synonymical matter will stand;

P. appassionata Harvey, 1876,

syn. *P. horni* Strand, 1914.

***Papaipema pertincta* Dyar.**

That the extensive plant genus *Lupinus* would be selected as a preference by some *Papaipema* species, was an early expectation on the part of the writer. The West, with its abundant specific forms seemed the natural abiding place for such a denizen, and the discovery of a Lupine feeder by Dr. L. P. Rockwood, of the U. S. Biological Laboratory, at Forest Grove, Oregon, proved confirmatory that still another genus of the Fabaceae offered a specific choice. Described in 1920,³ *pertincta* furnished the happy instance where a new species, together with some details of its early history, appear contemporaneously. Subsequently, Dr. Rockwood kindly forwarded to me both larva and adult, together with some ecological notes thereon. He writes: "I have collected the species near Forest Grove; however I would expect its range to be co-extensive with that of the host plant, *Lupinus polyphyllus* Lindl., which Piper and Beattie give as: 'In wet meadows, Vancouver Island to Oregon.' I might say that the species is very local because of its habitat, 'wet meadows.' It is replaced on higher, welldrained land by similar, but quite distinct species of *Lupinus*, and I found a few stems mined in the latter species which greatly resembled the work of the *Papaipema* in *L. polyphyllus*."

Observed as early as May 8, apparently at beginning of second stage, it was found to be "a small semi-looper which gnaws superficially the interior of the hollow leaf and especially the flower stalks of the large plant. The larvae apparently feed all up and down the hollow stems, huge in proportion to the larva at this date; and although only one larva is usually found to a stem, the large leaf of the stem infested wilts and dies." It is then "an active larva, dark vandyke brown with conspicuous whitish dorsal and sub-dorsal lines on last five abdominal, and last two thoracic segments; segments between vandyke brown with only dorsal line faintly indicated. Thoracic shield and head shining straw color, with vandyke brown streak on head prolonged on shield. Anal shield similar to thoracic, with dark sub-dorsal shades."

On July 8, the larvae were found to be well grown. They were then located in the stalks at the crown, sometimes below ground. "This part of the stalk was originally solid tissue, but the miners had eaten it out to form a pupation chamber. In each case a hole had been eaten in the stem near the ground, well above where the larva was located, through this hole the frass had been expelled." By September 9, all moths had emerged.

3.—Insecutor Inscitiae Menstruus, vol. VIII, 7-9, 1920.

Adult larvae, shrunken for pupation, showed the following characteristics: Head concolorous, dull brown, suture sufficient to show it bilobed, normally haired, width 3 mm. Cervical shield cleft by dorsal line, shaded faintly darker at sides, width 3.5 mm. The larva is of normal appearance, whitish, looks superficially like *nelita* Strk.; the first three abdominal segments show dull, pale purplish, with tubercles all well defined in dull brown. On joints two and three, tubercles I and II occur in a bar-like plate which bears a single seta. On abdominal segments, I exceeds II in each case to, and including joint nine; on ten, both of one size; also here IV is irregular, about twice the size of the blackish spiracle, with III slightly smaller than it, and IIIa smaller still. On ten, IV is low down with no accessory IVa; the ante-anal plate is fused across dorsum; the anal plate is concolorous, brown, with usual setae.

Pertincta shows in the male genitalia a close ontogenetic relationship with the common eastern type; the trigonate, spinuled tips of the valves have the lower end drawn out to a point or spur, and the curved clasp is outwardly toothed, in a similar manner to *marginidens* Gn., and a score of like-patterned species. My own observations on mountain meadows and their northern ecologic aspects, makes it seem probable that this moth will gain record as a Canadian insect also.

***Papaipema cataphracta* Grt.**

Ranging less northward than some others, this species remains tolerably constant through its entire area, if we except the suffused form *fluxa*, which prevails in the environs of Buffalo, N. Y., but even there, normal *cataphracta* is abundant. Its western limitation has not been defined but the species is rare at Chicago and the writer looked in vain for it in Colorado, though it is recorded from the state, while the aridity of the south-west is a barrier in that direction. Even in sandy pine barrens and the like acid soil conditions in certain parts of the eastern coastal plain, an absence of the species will be generally noted. So, with but a slight invasion past the Canadian border, it may be considered a species of the eastern half of the United States.

On the island of Martha's Vineyard, a few miles off the Massachusetts coast, a racial variation of *cataphracta* seems to have developed and since considerable entomological discussion of late has centered around the possibility of food-plant changes effecting species, together with the pertinacity whereby an acquired foodplant may retain favor in certain instances, it seems worth while citing this particular case.

In few lepidopterous genera are the food preferences of such an array of species so pronounced and individually fixed as exists in *Papaipema*, nor do those preferences so far pervade the floral gamut. Overlooking the somewhat enforced vagaries of *nebris* Gn. in a departure from its preferred Ambrosiaceae, *cataphracta* alone of all its fifty congeners is the notorious exception, and seems content to take up with a limitless host of stocky herbaceous plants, which our incomplete record shows to include seventeen plant families. But on Martha's Vineyard its preferred foodplant is *Decodon verticillatus* L., a somewhat shrubby, acid soil, water-loving plant, for this reason seemingly ill assorted to the work of such borers.

It is not known that a *Decodon* choice prevails to the exclusion of all others, but it surely stands as a chosen one in similar relation as do most of the

allies have a corresponding, individual choice. Strangely, on the main land, *Decodon* has not been found infested by it, up to this time.

For more than a decade the discoverer, Mr. Frank Morton Jones, of Wilmington, Del., has had this form under occasional observation, rearing a series which show a marked constancy and observing easily, with the exception of but one year, the larval work whenever it was actually sought. With customary spirit, he has kept the writer supplied with data and material, and lately, with half grown larvae, that the check-up might be complete. Weighing all details, it appears advisable to name this variation;

***Papaipema cataphracta sulphurata* new variety.**

There is no pronounced departure from the typical form except in coloration, and the size is relatively smaller. The ground color of the primaries is a deeper chrome yellow, while the markings and powderings are a richer brown—less smoky. The subterminal space is glistening purplish, rather than the bluish tinge of the type form. The stigmata are concolorous, never white as happens with the form *fluxa*. The secondaries are brighter and show the medial line and banded effect more clearly. Expanse, 34 to 38 mm. One male type (holotype) and four paratypes with the author, ten paratypes are returned to Mr. Jones who will place a representation in the United States National Museum; all are bred examples. No material difference exists in the genitalia. Twenty specimens show emergence dates ranging from Sept. 18 to 30.

Owing to the adverse character of *Decodon*, its woody texture and small stem, the larvae do not reach such size as when mining the lush, rank perennials. But their habit is similar and the continuous, unbroken lines, with the prominence of tubercle I on joints four, five and six, readily place them. The pupal change is in the gallery, and an exit aperture is provided in the usual manner. Whether *Amblyteles scelestus* Cress. is an important parasitic menace at this stage, as happens so generally with typical *cataphracta*, has not been determined. *

DESCRIPTIONS OF SIX NEW MIRIDAE FROM EASTERN NORTH AMERICA. (HEMIPTERA-MIRIDAE).*

BY HARRY H. KNIGHT,

Ames, Iowa.

***Plagiognathus tiliae* n. sp.**

This species runs to *nigrolineatus* Kngt. in my key (Hem. Conn., 1923, p. 431) but is distinguished at once by the lack of black lines on antennae and legs; uniformly pale yellow, or greenish yellow when newly emerged, hind femora with a few small fuscous points on anterior face.

♂. Length 3.3 mm., width 1.34 mm. Head: width, .74 mm., vertex .31 mm. Rostrum, length 1.28 mm., just attaining posterior margins of hind coxae. Antennae: segment I, length .21 mm.; II, 1.08 mm.; III, .51 mm.; IV, .31 mm.; uniformly yellowish. Pronotum: length .57 mm., width at base, 1.1 mm.

Coloration uniformly pale yellow, or just the color of the *Tilia* blossoms among which the insect retreats; femora with a few obsolete fuscous points arranged in a double row on anterior aspect; tibial spines pale to brownish. Cloth-

*—Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

ed with soft, recumbent, simple pubescence of pale to golden yellow color.

♀. Length 3.5 mm., width 1.5 mm. Head: width .72 mm., vertex .37 mm. Antennae: segment I, length .21 mm.; II, .85 mm., more slender than in the male; III, .48 mm.; IV, .28 mm. Pronotum: length .66 mm., width at base 1.24 mm. Coloration and pubescence similar to the male.

Holotype: ♂ July 11, 1922, University Farm, St. Paul, Minnesota (H. H. Knight); author's collection.

Allotype: taken with the type; Minnesota University collection.

Paratypes: 78 ♂ ♀ taken with the types. DISTRICT OF COLUMBIA—54 ♂ ♀ June 10 to June 26, 1891-1908, Washington (O. Heidemann). ♂ ♀ June 16, 1915, Washington (W. L. McAtee). MICHIGAN—♀ July 11, 1919, Washtenaw County (R. F. Hussey). MINNESOTA—♀ July 6, 1921, collected at light, 20 ♂ ♀ July 14, 8 ♂ ♀ July 25, 1924, University Farm, St. Paul (H. H. Knight).

Found breeding in the flower clusters of *Tilia americana* by the writer, O. H. Heidemann and Mr. W. L. McAtee. The nymphs are pale green in color and feed on the developing buds of the flower cluster. The adult stage is attained just as the flowers come into full bloom and the yellow color of the mature bugs matches the color of the flowers perfectly. When disturbed the bugs hide among the petals and are then hard to see.

***Psallus balli* n. sp.**

Distinguished from the known species of the eastern United States by the pale yellow to orange color and conspurcate character of the membrane; more strongly red on pronotum, scutellum, and cuneus.

♂. Length 3.5 mm., width 1.4 mm. Head: width .76 mm., vertex .34 mm. Rostrum, length 1.28 mm., extending upon sixth ventral segment, yellowish, apex blackish. Antennae: segment I, length .23 mm.; II, 1.08 mm., slender, not attaining thickness of segment I; III, .60 mm.; IV, missing; yellowish brown, scarcely darker apically. Pronotum: length .53 mm., width at base 1.18 mm.

Coloration pale yellow to orange, more reddish on pronotum, scutellum and cuneus; apical half of clavus infuscated, base of clavus and subapical field of corium distinctly pale; cuneus reddish, outer margin and apex yellowish. Membrane fuscous, central and apical area conspurcate with fine white dots of irregular and coalescing form, a large pale spot just behind apex of cuneus and smaller areole, but having a triangular blackish spot on outer margin at middle. Legs yellowish to orange color, similar to the body; femora with minute fuscous points, one such apparently forming at base of each hair; tibial spines blackish, a fuscous spot at base of each, becoming obsolete apically. Clothed with yellowish to golden brown simple pubescence, and intermixed on dorsum with silvery sericeous pubescence, a few fuscous hairs on pronotum and scutellum.

♀. Length 3.5 mm., width 1.4 mm. Head: width .73 mm., vertex .38 mm. Antennae: segment I, length .21 mm.; II, 1.03 mm.; III, broken. Pronotum: length, .53 mm., width at base, 1.18 mm. Pubescence and coloration very similar to that of the male.

Holotype: ♂ March 18, 1926, Sanford, Florida (E. D. Ball): author's collection.

Allotype: same data as the type.

Paratype: ♂ Aug. 31, 1925, Charleston, Mississippi (H. M. Harris).

Teleorhinus floridanus n. sp.

Allied to *tephrosicola* Kngt., but differs in structure of antennal segment II which has more than half its length strongly clavate; the combined length of segments III and IV not equal to length of segment II; coloration and pubescence very similar but pronotum of slightly different form; calli and anterior half of pronotal disk smooth and more distinctly depressed.

♂. Length 6.5 mm., width 2.4 mm. Head: width across eyes 1.08 mm., vertex .53 mm.; greatest length 1.43 mm. Rostrum, length 2.7 mm., reaching upon hind coxae, yellowish brown, basal segment reddish, apical segment blackish. Antennae: segment I, length .37 mm., thickness .114 mm.; II, length 2.1 mm., slender at base, becoming abruptly clavate just before middle, thickness of clavate portion .18 mm., black, slender base yellowish; III, 1.2 mm., yellowish to dusky; IV, .77 mm., fuscous. Pronotum: length 1.26 mm., width 1.76 mm., anterior angles .91 mm.

Holotype: ♂ April 24, 1920, Dunedin, Florida (W. S. Blatchley); author's collection.

Strongylocoris pallipes n. sp.

Differs from *stygius* Say in the pale legs and the long finger-like spines at apex of the male right genital clasper.

♂. Length 4.5 mm., width 2 mm. Head: width 1.16 mm., vertex .60 mm. Rostrum, length 1.12 mm., reaching base of intermediate coxae. Antennae: segment I, length .37 mm.; II, 1.28 mm.; III, .98 mm.; IV, .47 mm. Pronotum: length .93 mm., width at base 1.57 mm.

Black, shining, with punctuation and pubescence very similar to *stygius*, but legs entirely pale yellowish in color. Rostrum yellowish, apex black. Antennae fuscous to black, basal half of segment II yellowish brown. Distinguished by the form of the genital claspers; apex of right clasper with four finger-like spines, the two dorsal spines somewhat curved and nearly twice the length of the ventral pair.

♀. Length 5 mm., width 2.5 mm. Head: width 1.27 mm., vertex .73 mm. Antennae: segment I, length .38 mm.; II, 1.36 mm.; III, 1.04 mm.; IV, .50 mm. Pronotum: length 1.07 mm., width at base 1.81 mm. More robust than the male but very similar in coloration, punctuation, and pubescence.

Holotype: ♂ June 22, 1918, Battle Point, Virginia (J. G. Sanders); author's collection.

Allotype: same data as the type.

Paratypes: 2♂ 2♀, taken with the types. ♂ ♀ June 9, 1903, Beaufort, North Carolina (F. Sherman): numerous specimens of both sexes taken June 27, 1926, North Beach, Maryland (H. H. Knight and H. E. Ewing), found breeding on *Baccharis halimifolia* L. Many leaves of the plant, especially terminal growth, exhibited characteristic Mirid injury in the spotted and malformed leaves where the nymphs had fed.

Platytlellus zonatus n. sp.

This species runs to *rubrovittatus* Stal in my key (Hem. Conn., 1923, p. 551), but is distinguished at once by the orange colored lateral margins of the hemelytra and the larger size.

♂. Length 6.2 mm., width 2.4 mm. Head: width 1.26 mm., vertex .68 mm. Rostrum, length 2.2 mm., just attaining base of hind coxae. Antennae: segment I, length .58 mm.; II, 2 mm.; III, 1.46 mm.; IV, .77 mm. Pronotum: length 1.31 mm., width at base 2.1 mm.

Black, vertex except two lunate marks, lower half of face except tylus and apex of lora, collar, sides of pronotum, median line of disk and continuing on scutellum to cover one-third its width, orange red; embolium and narrow outer margin of corium, outer half of cuneus, and commissure of hemelytra, orange colored. More or less on pleura and sides of venter orange and obscured with blackish. Femora yellowish to orange but anterior and posterior aspects obscured with fuscous. Body surface covered with fine granular material, thickly clothed with fine short yellowish to fuscous pubescence. Genital segment without tubercles.

♀. Length 6.6 mm., width 2.6 mm. Head: width 1.28 mm., vertex .74 mm. Antennae: segment I, length .60 mm., II, 1.8 mm.; III, 1.34 mm.; IV, .83 mm. Pronotum: length 1.31 mm., width at base 2.26 mm. Slightly more robust than the male but very similar in coloration and pubescence.

Holotype: ♂ July 12, 1919, Hennepin County, Minnesota (H. H. Knight), author's collection.

Allotype: July 8, 1914, Lake Itasca, Minnesota, (S. A. Graham); Minnesota University collection.

Paratypes: MICHIGAN—♀ July 14, 1918, Cheboygan County (R. F. Hussey). MINNESOTA—2♂, taken with type. ♂ July 5, 1922, ♂ Aug. 7, 1924, Hennepin County (A. Hertig). NORTH DAKOTA—2♂ Aug. 4, 1920, Turtle Mts. (T. H. Hubbell). WISCONSIN—♀ Aug. 13, 1916, Amery (J. G. Sanders). MANITOBA—♂ ♀ July 30, 1922, ♂ 2♀ Aug. 12, 1920, Aweme (N. Criddle).

This species occurs among grasses in open marshy places, or about bog formations overgrown with herbaceous plants.

***Platytylellus confraternus* var. *collaris* n. var.**

Differs from typical *confraternus* Uhler in the black frons and vertex, and in the more broadly black pronotal disk although the collar remains red; pronotal disk black with lateral margins only red.

This form has the pronotal disk more distinctly convex, with an apparent flattening of the collar, characters which may indicate a distinct species, but until the male is studied for confirmation it seems best to place this form as a variety of *confraternus*. The color pattern of *collaris* is suggestive of typical *fraternus* Knight, but the pronotum is more broadly black while the collar remains red.

Type: ♀ April 4, 1911, Ormond, Florida (W. S. Blatchley); author's collection.

Paratype: ♀, April, 1914, Gainesville, Florida (G. G. Ainslie).

Platytylellus confraternus (Uhler) was described from Colorado (1872) and at the same time recorded from certain eastern states. The writer has typical material from Colorado, the type locality, as well as from New Mexico, and after study of all available material is inclined to believe that the species does not range east of the 100th meridian. Most of the eastern records probably refer to *fraternus* Knight (Hem. Conn., 1923, p. 557.).

Sthenarus plebejus Reuter

Ofv. Finska Vet.-Soc. Forh., XLIX, 1906-1907, No. 5, p. 26.

I have recently received a male specimen, collected Nov. 19, 1924, Dunedin, Florida (W. S. Blatchley), which I can only determine as this species. It was described from Jamaica but has never been recorded from the United States. To facilitate its recognition the following redescription is added:

The small size and reddish brown color gives a superficial resemblance to *Plagiognathus cornicola* Kngt., but the differently shaped head and silvery, scale-like pubescence on sides of thorax give it the aspect of a *Psallus*; tibiae and spines pale, without trace of dark spots.

♂. Length 2.6 mm., width .76 mm. Head: width .73 mm., vertex .36 mm.; base of vertex and posterior margins of eyes forming a slightly arcuate line and fitting closely against the pronotum; eyes rather large, their height (.37 mm.) as viewed from the side fully equal to width of vertex. Rostrum apparently (imbedded) attaining posterior margins of intermediate coxae. Antennae: segment I, length .17 mm.; II, .83 mm., about equal in thickness to segment I although more slender near base; III, .33 mm., IV, .31 mm.; yellowish brown, the last two segments dusky to fuscous; clothed with fine yellowish pubescence. Pronotum: length .46 mm., width at base 1 mm.; from base of pronotum to apex of scutellum, .43 mm., thus nearly equal to length of pronotum.

Clothed with simple, recumbent, only moderately abundant, yellowish pubescence, the propleura and sides of thorax bearing silvery, scale-like pubescence. Color fusco-brownish to reddish brown, calli, vertex, and scutellum becoming fuscous; hemelytra somewhat translucent, cuneus of the same shade of fusco-brownish as the corium; membrane uniformly fusco-brownish, veins scarcely paler. Ventral surface of body, head except vertex, first rostral segment, and coxae, reddish; femora, tibiae and spines uniformly yellowish, tarsi becoming dusky.

NOTE ON PEGOMYIA AFFINIS STEIN' (DIPTERA, MUSCIDAE).

BY C. H. CURRAN,

Ottawa, Ont.

While collecting in the vicinity of Severn, Ontario, during the past summer I came across the home of a woodchuck or ground-hog. The animal had disappeared into the hole on my approach and I had little hope of collecting any Diptera. However, by poking the handle of my net into the opening I scared out several flies, most of which at once returned to the hole where they evidently remained fairly close to the exit. By frightening them out several times I managed to capture two specimens before they all disappeared. These proved to be females of *Pegomyia affinis* Stein. In a genus composed primarily of leaf mining species this habit of frequenting the habitat of ground-hogs seems rather strange and probably indicates that the species breeds upon excrement or upon decaying refuse carried into its retreat by the ground hog.

A PRELIMINARY REVISION OF THE CAMPOPLEGIINAE IN THE
CANADIAN NATIONAL COLLECTION, OTTAWA.

BY HENRY L. VIERECK,

Ottawa, Ont.

(Continued from page 225)

Campoplex (Hypothereutes) Foerster).*Campoplex (Hypothereutes) vernalis* Viereck=*Campoplex (Ameloc-tonus) vernalis* Viereck.**Campoplex (Ameloctonus) cuneae n. sp.**Related to *C. (A.) pallipes* Provancher.

Female.—Length 6 mm.; black, scape yellowish, blackish behind, pedicel mostly black, brownish in front, yellowish at apex, mandibles mostly yellow, palpi yellowish, tubercles and tegulae yellow, fore and mid coxae and trochanters yellow, hind coxae reddish, hind trochanters more or less dark stramineous, femora reddish, the hind pair darkest, fore and mid tibiae stramineous with their extensor surface yellowish, hind tibiae reddish, slightly infuscated at base and apex, fore and mid tarsi rather dark stramineous, hind tarsi blackish brown, their basitarsi pale at extreme base, abdomen reddish save for the narrow part of the first tergite which is blackish red and the plica which is yellowish; areola truncate at base, rugulose, apparently as wide as long, confluent with the rugulose petiolarea, the area-dentiparia and area-spiraculifera confluent; first tergite with a median longitudinal furrow on the apical part of the petiole and the basal part of the postpetiole to each side of which there is an impression, sheaths of the ovipositor longer than the truncature of the abdomen.

Holotype.—♀, Trenton, Ont., Sept. 30, 1906, ex nest of fall web worm (*Hyphantria cunea*) by Evans; No. 1723 in the Canadian National Collection, Ottawa.

Campoplex (Ameloctonus) certus n. sp.Related to *C. (A.) perrivalis* Vier.

Female. Length 6 mm.; black, scape and pedicel yellow, blackish behind, first joint of flagel partly yellowish in front, rest of flagel brownish, mandibles mostly yellow, palpi yellowish, tubercles and tegulae yellow, fore and mid legs including coxae and trochanters, yellow, mid femora partly faintly reddish, hind coxae and femora reddish, their trochanters yellow, hind tibiae yellowish, darkened at base and apex, hind tarsi dark brownish with the sutures pale, apical two-thirds of postpetiole yellowish, rest of first abdominal segment black, all other tergites reddish throughout, plica yellowish; areola acutely angular at base, confluent with the petiolarea, both rather weakly transversely costate; abdomen nearly clavate, sheaths of the ovipositor apparently shorter than the apical truncature.

Holotype.—♀, Ottawa, Ont., Aug. 23, 1899, (W. H. Harrington); No. 1726 in the Canadian National Collection, Ottawa.

Paratype.—♀, data the same but Sept. 25, 1899.

Campoplex (Ameloctonus) speciosus n. sp.Related to *C. (A.) certus* Viereck.

Female. Length 4 mm.; compared with the original description of *C. (A.) certus* Vier. this differs as follows. Flagel black, throughout, fore and mid coxae stramineous, yellowish at apex, their trochanters yellow, their femora dark

stramineous, their tibiae and tarsi pale stramineous, flexor surface of hind tibiae mostly reddish, their extensor surface with the basal and apical fourths blackish, the intermediate two-fourths yellowish, basal two-thirds of hind basitarsi yellowish, first abdominal segment black, narrowly brownish at extreme apex, rest of tergites black excepting the apical half of the second and apical two-thirds of third which are mostly yellowish, plica yellowish; areola finely sculptured, the petiolarea hardly more sculptured; ovipositor hardly longer than the apical truncature.

Holotype—♀, Banff, Alta., May 27, 1922, (C. B. D. Garrett); No. 1727 in the Canadian National Collection, Ottawa.

Campoplex (Ameloctonus) eurythemeae n. sp.

Related to *C. (A.) clisiocampae* Weed.

Female. Length 6 mm.; black, scape and pedicel blackish, mandibles mostly yellow, palpi yellowish, tegulae yellow, fore and mid legs including coxae, dark stramineous, their trochanters yellow, extensor surface of tibiae rather yellowish, femora reddish, hind coxae black, their proximal trochanters dark stramineous, their distal trochanters yellowish, their femora reddish, hind tibiae with their flexor surface partly reddish, their extensor surface whitish at base and in the middle, black near base and at apex, abdomen black, postpetiole reddish apically, apical half of second tergite mostly yellowish with an apical black band, third and fourth tergites yellowish, blackish at base, fifth and following tergites with the lower half of their sides yellowish, plica partly yellow; areola nearly acutely angular at base, longer than wide, mostly coarsely sculptured, petiolarea transversely costate; abdomen obliquely truncate, sheaths of the ovipositor barely longer than the truncature.

Holotype—♀, Kinistino, Sask., July 10, ex *Eurymus eurytheme* (J. Fletcher); No. 1725 in the Canadian National Collection, Ottawa.

Allotype—♂, same data. The allotype has the basal area nearly quadrate.

Campoplex (Ameloctonus) nematicidus n. sp.

Related to *C. (A.) clisiocampae* Weed.

Female. Length 5 mm.; black, scape and pedicel with the extreme apical margin pale, basal half of mandibles black, their apical half mostly stramineous, palpi dull stramineous, tegulae blackish, coxae black, proximal trochanters mostly black, fore and mid distal trochanters pale stramineous, hind distal trochanters dark stramineous, partly blackish, rest of fore and mid legs stramineous, hind femora reddish, their tibiae and tarsi stramineous, the former darker than the latter, tibiae darkened at base, the tarsal joints darkened at apex, abdomen black, a narrow apical margin on the first tergite, apical fourth of second, all but a large basal, median black area and rest of the tergites, reddish, plica stramineous; areola truncate at base, apparently a little longer than wide, finely transversely lineolate, confluent with the nearly transversely costate petiolarea; ovipositor apparently not longer than the apical truncature of the abdomen.

Holotype—♀, Hatzic, B. C., June 18, 1924, ex sawfly on gooseberry (W. Downes); No. 1728 in the Canadian National Collection, Ottawa.

Paratype—♀, data the same.

Campoplex (Ameloctonus) congeneris n. sp.

Related to *C. (A.) nematicidus* Viereck.

Female. Length 7 mm.; compared with the original description of *C. (A.) certus* Vier. this differs as follows. Flagel black throughout, fore coxae, their trochanters and mid trochanters yellow, rest of fore legs stramineous with the extensor surface of their tibiae yellowish, mid coxae stramineous, their femora and tibiae reddish, the latter with their extensor surface partly yellowish, mid tarsi stramineous, hind legs mostly reddish, their distal trochanters stramineous, their tibiae black at base, blackish at apex and their tarsi black, a little more than the apical half of the postpetiole reddish; areola truncate at base, seemingly confluent with the basal area, areola finely reticulated; abdomen truncate, the sheaths of the ovipositor apparently as long as the truncature.

Holotype—♀, Agassiz, B. C., May 5, 1922, (R. Glendenning); No. 1724 in the Canadian National Collection, Ottawa.

Campoplex (Ameloctonus) asper n. sp.

Related to *C. (A.) nematicidus* Viereck.

Female. Length 7 mm.; compared with the original description of *C. (A.) nematicidus* Vier. this differs as follows. Apical half of scape, in front, brownish, pedicel black, apical half of mandibles mostly yellowish, palpi dark stramineous, tegulae yellowish with a nearly colorless margin, mid femora reddish, third, fourth and fifth, hind tarsal joints fuscous, hind tibiae pale at base, first tergite black except for the apical half of the postpetiole which together with the second, third, fourth and fifth tergites is reddish, the fifth tergite blackish above near the extreme apex, rest of tergites black, excepting the lower half, of the sides of the sixth, which is brownish; propodeum beyond the basal transverse carina virtually exareolate, coarsely reticulated, areola narrowly truncate at base, its lateral carinae barely indicated, abdomen almost clavate, obliquely truncate, the ovipositor apparently not longer than the truncature.

Holotype—♀, Waterton Lakes, Alta., July 4-11, 1923, (J. McDunnough); No. 1729 in the Canadian National Collection, Ottawa.

Campoplex (Ameloctonus) degrysei n. sp.

Female. Length 6 mm.; black, antennae black throughout, mandibles mostly pale, palpi pale tegulae yellow, fore and mid coxae brownish stramineous, black at base, hind coxae black, fore and mid trochanters yellowish, hind proximal trochanters black, their distal trochanters brownish stramineous, femora reddish, fore and mid tibiae dark stramineous, their extensor surface mostly yellowish, flexor surface of hind tibiae reddish, elsewhere black near base and at apex, whitish at base and in the middle, fore and mid tarsi dark stramineous, their basitarsi mostly yellowish, the end joint of the mid tarsi blackish, hind tarsi blackish save for the basal half of their basitarsi which is mostly yellowish, abdomen black, sides of the second tergite near apex partly reddish, sides of the third, fourth and fifth tergites along the lower margin obscurely reddish, areola narrowly truncate at base, a little longer than wide, coarsely sculptured, confluent with the petiolarea which is coarsely rugose, a trenchant carina basally between the area dentiparia and the area spiraculifera; abdomen obliquely truncate, sheaths of the ovipositor a little longer than the truncature.

Holotype—♀, Indian Head, Sask., Aug. 25, 1924; No. 9350b, No. 1730 in the Canadian National Collection, Ottawa.

Paratype—♀, same data, but May 25, No. 9350a.

Campoplex (*Ameloctonus*) *intimus* n. sp.

Related to *C. (A.) asper* Viereck.

Female. Length 5 mm.; black, scape brownish in front, pedicel pale in front, flagel brownish beneath, elsewhere the antennae are blackish, mandibles mostly yellow, palpi yellowish, tubercles and tegulae yellow, fore and mid coxae and all trochanters yellow, hind coxae black stramineous at apex, femora more or less reddish, the hind pair faintly blackish at apex, rest of fore and mid legs stramineous, hind tibiae stramineous. brownish near base and at apex, their tarsi brownish with their basitarsi pale at extreme base, abdomen black, the apical edge of the first tergite stramineous, apical fifth of the second tergite yellowish, apical third of third also yellowish, basal and apical band of fourth and fifth tergites yellowish, abdomen yellowish at apex, lower half of sides of third, fourth fifth and sixth tergites dark yellowish; areola truncate at base, finely sculptured, nearly three times as long as wide at the costulae, confluent with the feebly transversely lineolate, petiolarea; ovipositor hardly longer than the apical truncature of the abdomen.

Holotype—♀, Montreal, Que., July 16, 1906, (Beaulieu); No. 1731 in the Canadian National Collection, Ottawa.

Paratypes—2 ♀, Ottawa, Ont., Aug. 1, 1894, (W. H. Harrington); Oliver. B. C., May 26, 1921 (C. B. Garrett).

Campoplex (*Ameloctonus*) *oblongus* n. sp.

Related to *C. (A.) intimus* Viereck.

Female. Length 6 mm.; compared with the original description of *C. (A.) intimus* Vier. this differs as follows. Scape and pedicel black except at extreme apex where they are brownish, flagel black, palpi whitish, hind proximal trochanters black with an apical yellowish margin, hind femora reddish throughout, fore and mid tibiae and tarsi mostly reddish, their tibiae with the extensor surface most yellowish, flexor surface of hind tibiae reddish, rest of hind tibiae stramineous blackish near base and black at apex, hind tarsi black, their joints pale at extreme base, apical fourth of third tergite reddish, fourth and following tergites with an apical reddish band, abdomen reddish at apex, lower two-thirds of sides of fourth and following tergites mostly reddish; postpetiole finely reticulated.

Holotype—♀, Orillia, Ont., July 18, 1923, (C. H. Curran); No. 1732 in the Canadian National Collection, Ottawa.

(To be continued)

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